

REMARKSI. Introduction

In response to the Office Action dated September 28, 2004, claims 1 and 16 have been amended. Claims 1-30 remain in the application. Re-examination and re-consideration of the application, as amended, are respectfully requested.

II. The Cited References and the Subject Invention

## A. The Clarke Reference

U.S. Patent No. 3,151,704, issued October 6, 1964 to Clarke discloses a spring motor. The spring motor includes a second spring means for increasing the starting torque and/or the length of run. This spring means may take the form of a power spring of various types, such as a conventional power spiral spring, a torsion spring, or other suitable spring means. See Col. 2, lines 32-37.

## B. The Chisholm Reference

U.S. Patent No. 5,386,884, issued February 7, 1995 to Chisholm discloses spring assemblies. A spring assembly of the kind having a coiled strip spring member (34) supported at one end on an arcuate drum portion (16) about which it is reverse wound and coiled at its other end about an abutment (20) further includes a base plate (10) mounting the drum portion (16) and a second base plate (18) mounting the abutment (20), the base plates (10) and (18) being interconnected by pins (32) attached to base plate (18) running in slots (26, 28) provided on base plate (10) so as to prevent relative movement of the base plates which would allow the spring to coil further about the abutment (20). The base plate (10) is provided with a cover (40) with which it forms a housing portion and the base plate (18) is provided with a cover (38) with which it forms a second housing portion. The assembly can be dropped on to support pins (14, 22) attached to respective halves (42, 44) of a hinge, e.g. of an automobile trunk or lid. See Abstract.

### C. The Nettles Reference

U.S. Patent No. 3,175,780, issued March 30, 1965 to Nettles discloses a ribbon reinking device.

### D. The Subject Invention

The present invention describes a method and apparatus for changing the mass properties of an attached structure. An apparatus in accordance with the present invention comprises a storage spool, an output spool, and a flexible material having a first end coupled to the storage spool and a second end coupled to the output spool, wherein a length of the flexible material is distributed between windings of the storage spool and the output spool to adjust mass properties of an attached structure.

### E. Differences Between the Subject Invention and the Cited References

None of the cited references, alone or in any combination, teach or suggest the limitations of the claims of the present invention. Specifically, none of the cited references teach or suggest the limitation of distributing a length of the flexible material between windings of the storage spool and the output spool to adjust mass properties of a spacecraft as recited in the claims of the present invention.

### III. Office Action Prior Art Rejections

On page (2), the Office Action rejected claims 1-2, 6-15, 16-17, and 21-30 under 35 U.S.C. § 102(b) as being anticipated by Clarke, U.S. Patent No. 3,151,704 (Clarke). On page (3), the Office Action rejected claims 1-6, 8-10, 16-21, and 23-25 under 35 U.S.C. §102(b) as being anticipated by Chisholm, U.S. Patent No. 5,386,884 (Chisholm). On page (4), the Office Action rejected claims 1, 3-5, 16, and 18-20 are rejected under 35 U.S.C. §102(b) as being anticipated by Nettles, U.S. Patent No. 3,175,780 (Nettles). Applicants respectfully traverse these rejections.

Inherency "may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269(Fed. Cir. 1991). Instead, to establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing

described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co.*, 948 F.2d at 1268.

In finding anticipation by inherency, the Office Action ignored the foregoing critical principles. The Office Action has not shown that the distributing of a length of the flexible material between windings of the storage spool and the output spool to adjust mass properties is necessarily present in the references of record.

The Clarke reference does not discuss mass properties. The Clarke reference is directed toward a motor having a high starting torque in a specific direction. See Col. 1, lines 28-33.

The Chisholm reference does not distribute the flexible material (34) at all. The flexible material (34) is fixed in place by rivet (36) and merely bends along the arcuate metal plate (16) when the spring assembly is actuated. Further, mass properties are not mentioned anywhere in Chisholm, and, as such, adjustment of mass properties is also not mentioned. Thus, the Chisholm reference cannot teach or suggest at least the limitation of distributing a length of the flexible material between windings of the storage spool and the output spool to adjust mass properties of an attached structure as recited in the claims of the present invention.

The Nettles reference also does not mention mass properties. Further, the flexible material in the Nettles reference is a typewriter ribbon.

Further, none of the cited references mention trimming the mass properties of a spacecraft. As such, and in order to expedite prosecution, the Applicants have amended the claims. The Applicants believe that the claims as amended render the rejections moot.

The various elements of the Applicants' claimed invention together provide operational advantages over the systems disclosed in Clarke, Chisholm, and Nettles. In addition, Applicants' invention solves problems not recognized by Clarke, Chisholm, and Nettles.

#### IV. Dependent Claims

Dependent claims 2-15 and 17-30 incorporate the limitations of their related independent claims, and are therefore patentable on this basis. In addition, these claims recite novel elements even more remote from the cited references. Accordingly, the Applicants respectfully request that these claims be allowed as well.

V. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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